Microsoft Technology

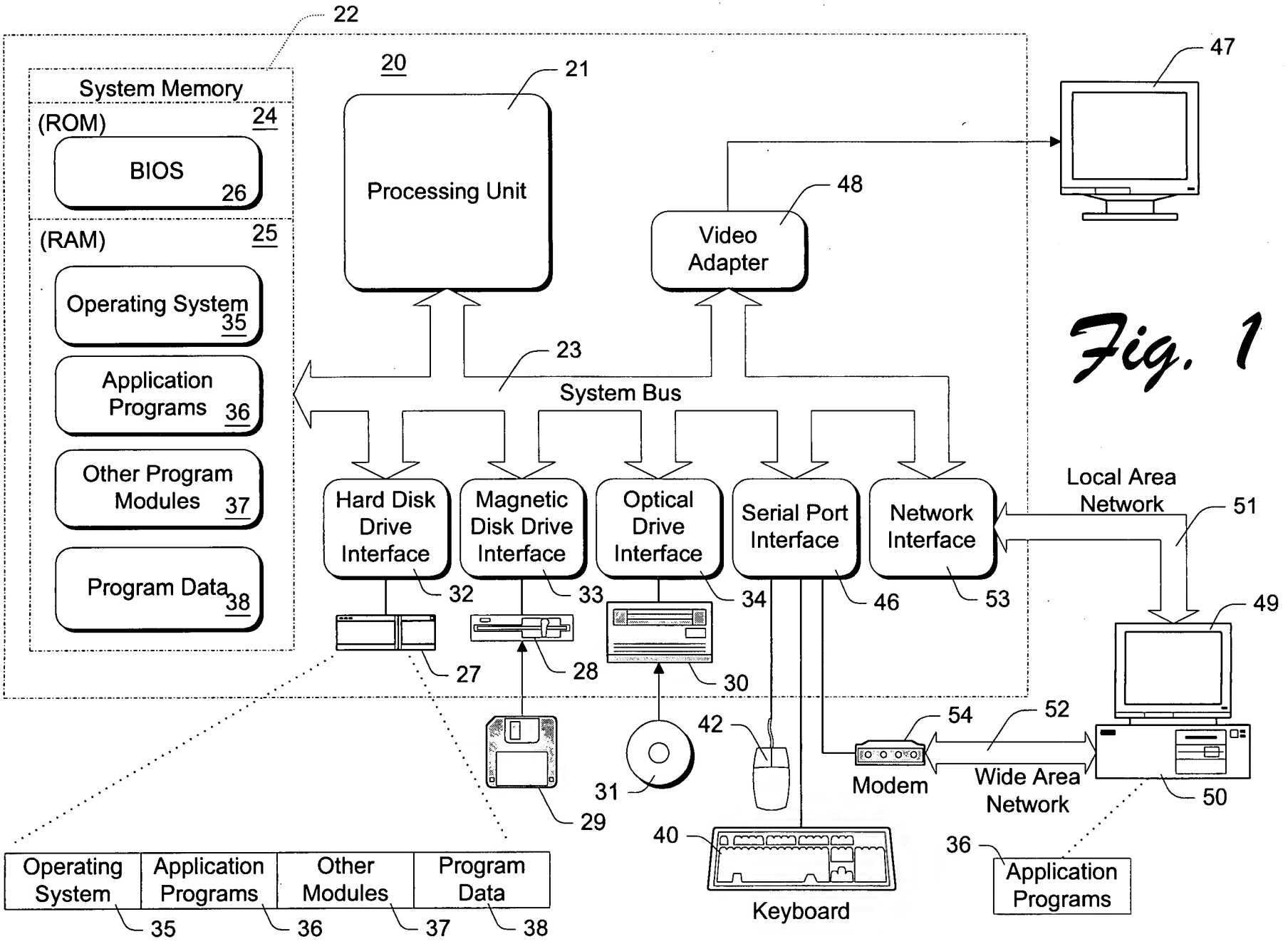

Fig. 1

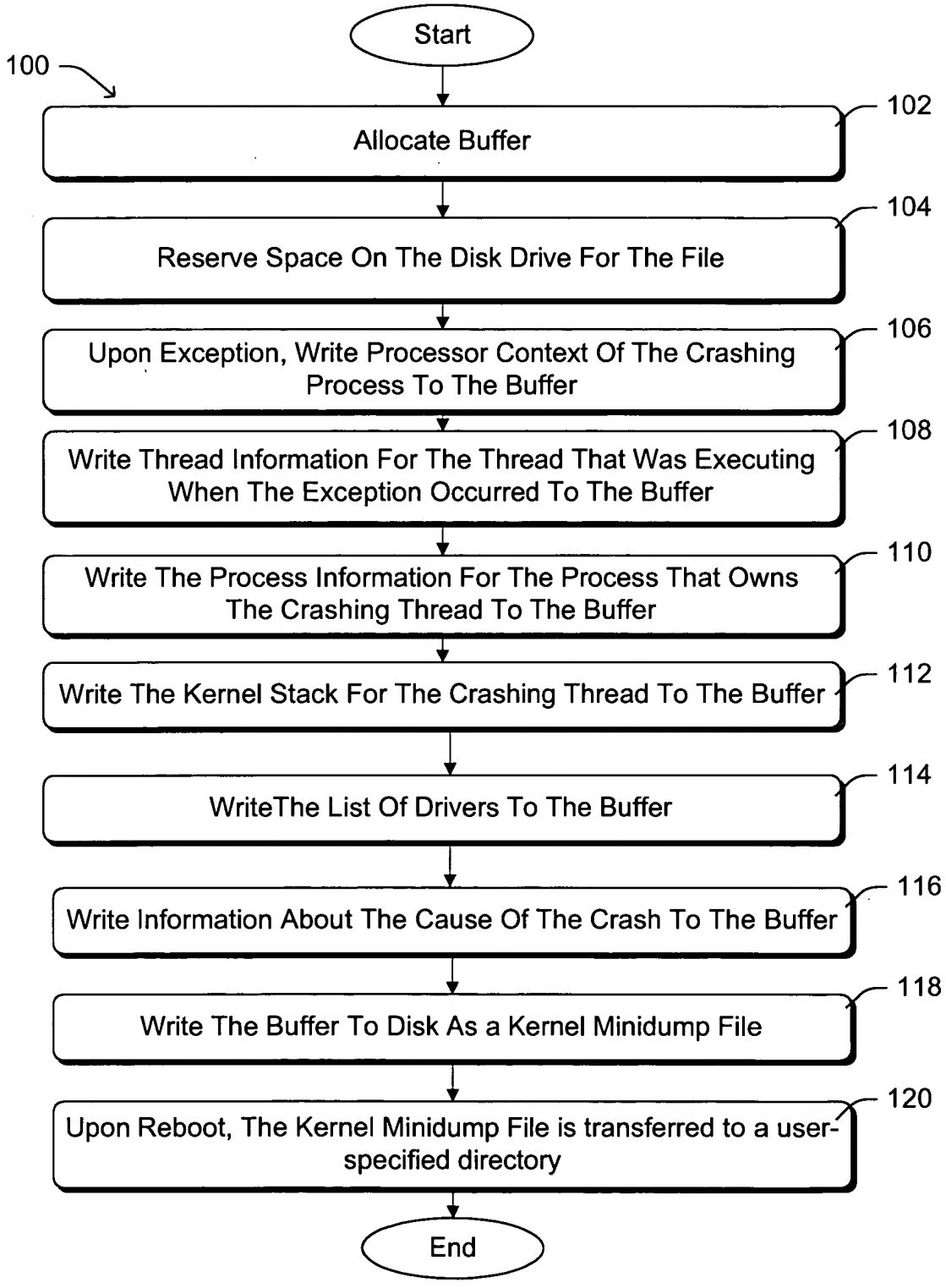
Start
100
Allocate Buffer
102
Reserve Space On The Disk Drive For The File
104
Upon Exception, Write Processor Context Of The Crashing Process To The Buffer
106
Write Thread Information For The Thread That Was Executing When The Exception Occurred To The Buffer
108
Write The Process Information For The Process That Owns The Crashing Thread To The Buffer
110
Write The Kernel Stack For The Crashing Thread To The Buffer
112
WriteThe List Of Drivers To The Buffer
114
Write Information About The Cause Of The Crash To The Buffer
116
Write The Buffer To Disk As a Kernel Minidump File
118
Upon Reboot, The Kernel Minidump File is transferred to a user-specified directory
120
End

Fig. 2

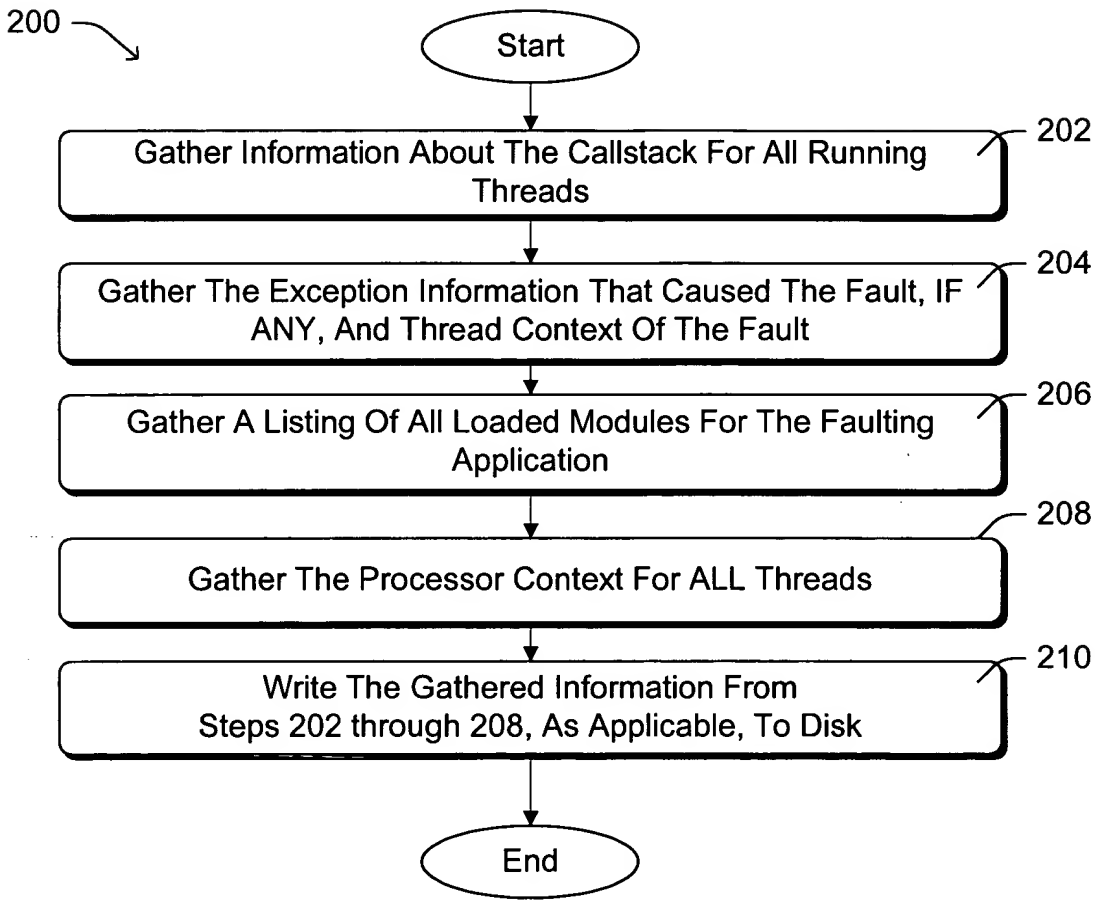
200
Start
Gather Information About The Callstack For All Running Threads
202
Gather The Exception Information That Caused The Fault, IF ANY, And Thread Context Of The Fault
204
Gather A Listing Of All Loaded Modules For The Faulting Application
206
Gather The Processor Context For ALL Threads
208
Write The Gathered Information From Steps 202 through 208, As Applicable, To Disk
210
End

Fig. 3

300

	Excel	Outlook	IE
Number of threads	10	14	12
Largest Stack size in KB	2	2	8
Total Stack Size in KB	5	5	17
Number of Modules	56	79	82
Size of Mini-dump File in KB	38	50	61

Fig. 4

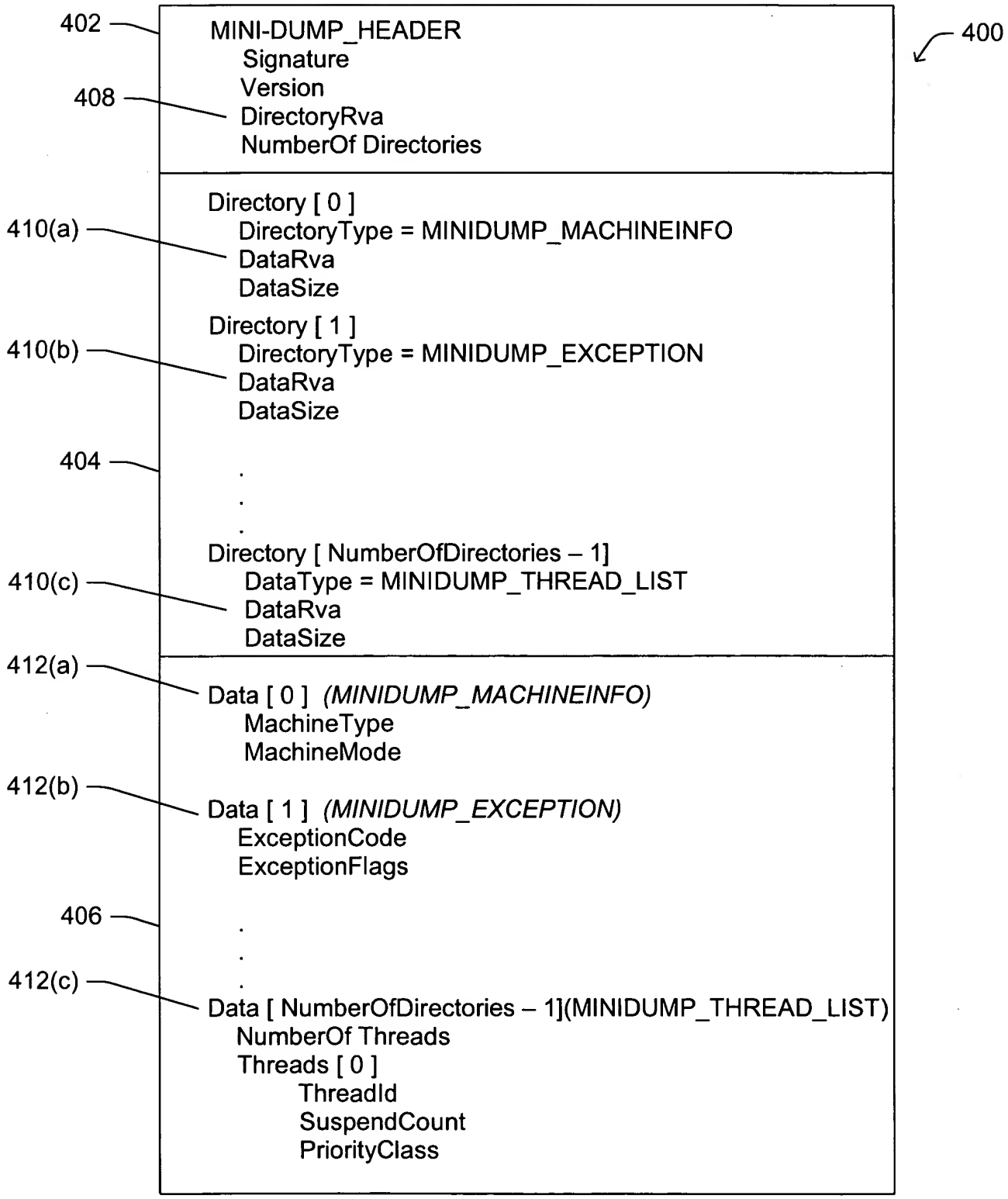
402
MINI-DUMP_HEADER
Signature
Version
408
DirectoryRva
NumberOf Directories
400
Directory [0]
410(a)
DirectoryType = MINIDUMP_MACHINEINFO
DataRva
DataSize
Directory [1]
410(b)
DirectoryType = MINIDUMP_EXCEPTION
DataRva
DataSize
404
.
.
.
Directory [NumberOfDirectories – 1]
410(c)
DataType = MINIDUMP_THREAD_LIST
DataRva
DataSize
412(a)
Data [0] (MINIDUMP_MACHINEINFO)
MachineType
MachineMode
412(b)
Data [1] (MINIDUMP_EXCEPTION)
ExceptionCode
ExceptionFlags
406
.
.
.
412(c)
Data [NumberOfDirectories – 1](MINIDUMP_THREAD_LIST)
NumberOf Threads
Threads [0]
ThreadId
SuspendCount
PriorityClass

Fig. 5

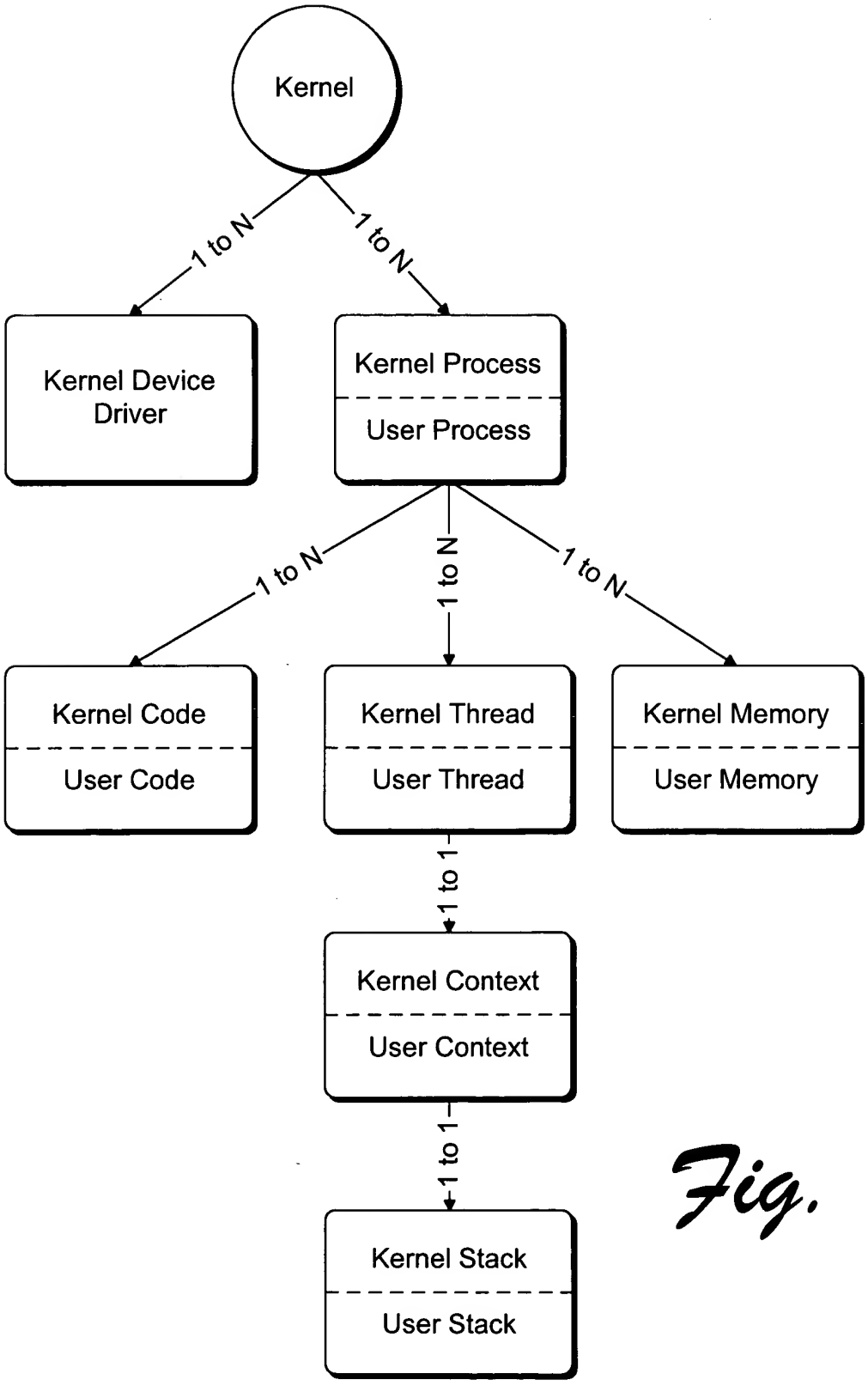
Kernel
1 to N
1 to N
Kernel Device Driver
Kernel Process
User Process
1 to N
1 to N
1 to N
Kernel Code
User Code
Kernel Thread
User Thread
Kernel Memory
User Memory
1 to 1
Kernel Context
User Context
1 to 1
Kernel Stack
User Stack

Fig. 6